1: Nucleic Acids Res. 1988 Apr 25;16(8):3223-38. Related Articles, Links

Different regulatory elements are required for cell-type and stage specific expression of the Xenopus laevis skeletal muscle actin gene upon injection in X.laevis oocytes and embryos.

Steinbeisser H, Hofmann A, Stutz F, Trendelenburg MF.

Institut fur experimentelle Pathologie, Deutsches Krebsforschungszentrum, Heidelberg, FRG.

In the present study, we demonstrate by transcript mapping that the injected Xenopus skeletal muscle alpha-actin gene is transcribed and spliced in Xenopus oocytes but not correctly initiated at the alpha-actin promoter. This leads to correctly spliced transcripts even if constructs without putative promoter sequences are injected. On the other hand, alpha-actin transcripts are translated in injected oocytes as shown by the detection of alpha-actin protein. By contrast, correctly initiated alpha-actin transcripts can be found in neurula embryos when the injected clone contains 5' flanking sequences extending from +27 to -680. alpha-actin gene fragments without the 680 nucleotides 5' flanking region are activated unspecifically after midblastula transition, whereas the clones carrying this region are activated correctly at the end of gastrulation. Cell type specific expression seems to be modulated by sequences within the transcribed region.

PMID: 3375055 [PubMed - indexed for MEDLINE]
